

DO MALES WITH PATELLOFEMORAL PAIN HAVE POSTEROLATERAL HIP MUSCLE WEAKNESS?

Lisa T. Hogleund, PT, PhD¹

Rosemary O. Burns, PT, DPT²

Allen L. Stepney, Jr, PT, DPT³

ABSTRACT

Background: Patellofemoral pain is common in physically active adults. Females with patellofemoral pain have been shown to have posterolateral hip muscle weakness, but there is a paucity of research examining hip muscle strength in males with patellofemoral pain.

Hypothesis/Purpose: The purpose of this study was to examine posterolateral hip muscle strength in males with patellofemoral pain compared to asymptomatic males. It was hypothesized that males with patellofemoral pain would have decreased strength of the hip extensor, hip external rotator, and hip abductor muscles compared to healthy, asymptomatic males.

Study Design: Descriptive, cross-sectional

Methods: Thirty-six adult males with patellofemoral pain and 36 pain-free males participated in the study. The patellofemoral pain group were required to have retropatellar pain reproduced by activities that loaded the patellofemoral joint (squatting, descending stairs, etc.). Peak isometric torque of the hip extensors, hip external rotators, and hip abductors was measured with an instrumented dynamometer. Torque was normalized by body mass and height. Between-group differences were analyzed with parametric or non-parametric tests, as appropriate. The level of significance was adjusted for multiple comparisons.

Results: Hip extensor torque was significantly reduced in the patellofemoral pain group compared to the control group ($p = .0165$). No differences were found between groups for the hip external rotators or hip abductors ($p > .0167$).

Conclusion: Males with patellofemoral pain appear to have weakness of the hip extensors, but unlike females with patellofemoral pain, they do not appear to have weakness of the hip abductors or hip external rotators. The findings of this study suggest that muscle strength factors associated with patellofemoral pain in males may be different from muscle strength factors in females. Clinicians examining and designing plans of care for male patients with patellofemoral pain should consider that the hip abductors and hip external rotators may not be weak in men with this condition.

Level of evidence: Level 3

Key words: Anterior knee pain, hip muscles, male, patellofemoral joint, strength testing

¹ Thomas Jefferson University, Jefferson College of Health Professions, Department of Physical Therapy, Philadelphia, Pennsylvania, USA

² Spaulding Rehabilitation, Malden, Massachusetts, USA

³ PowerBack Rehabilitation Center, Moorestown, New Jersey, USA

Conflict of Interest Disclosure Statement: The author or authors affirm that they have no financial affiliation (including research funding) that has direct financial interest in any matter included in this manuscript.

CORRESPONDING AUTHOR

Lisa T. Hogleund

Thomas Jefferson University

901 Walnut Street

5th Floor

Philadelphia, PA 19107

E-mail: Lisa.Hogleund@jefferson.edu